

PATENT



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Date: Oct 21 2003

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**IN THE UNITED STATES PATENT AND TRADEMARK OFFICE**

In re patent application of:

Applicants: David S. Wehrle, *et al.*

Examiner: Rehana Perveen

Serial No: 09/546,089 ✓

Art Unit: 2182

Filing Date: April 10, 2000 ✓

Title: POINTBUS ARCHITECTURE AND AUTOMATIC SEQUENTIAL ADDRESSING

**Mail Stop Appeal Brief - Patents  
Commissioner for Patents  
P.O. Box 1450  
Alexandria, Virginia 22313-1450**

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**APPEAL BRIEF**

Dear Sir:

Applicants submit this brief in triplicate in connection with an appeal of the above-identified patent application. The Commissioner is authorized to charge the fee of \$330.00 associated with this document and any other necessary fees to Deposit Account No. 50-1063.

**I. Real Party in Interest (37 C.F.R. §1.192(c)(1))**

The real party in interest in the present appeal is Allen-Bradley Company, Inc., the assignee of the present application.

**II. Related Appeals and Interferences (37 C.F.R. §1.192(c)(2))**

Appellants, appellants' legal representatives, and/or the assignee of the present application are not aware of any appeals or interferences which will directly affect, or be directly affected by or have a bearing on the Board's decision in the pending appeal.

**III. Status of Claims (37 C.F.R. §1.192(c)(3))**

Claims 1-17 are pending in the application, and claims 4-12 are presently under consideration. The rejection of claims 4, 6, 7, and 9-12 and objection of claims 5 and 8 are appealed.

**IV. Status of Amendments (37 C.F.R. §1.192(c)(4))**

No claim amendments have been made subsequent to the final rejection of March 7, 2003.

**V. Summary of Invention (37 C.F.R. §1.192(c)(5))**

The present invention relates to systems and methods that enable communication with at least one I/O module within an adaptable control system. Such control system includes a physical media that provides two disparate protocols. (p. 4, ln. 15-18). The first protocol enables at least one I/O module to receive network communications *via* a sequentially ordered enablement process. (p. 13, ln. 3-5). The second protocol is a network communications protocol, for example, a DeviceNet protocol. For example, the first protocol enables I/O modules to communicate with a network interface and the second protocol is the protocol utilized to communicate. (p. 3, ln. 14-19).

The present invention enables a manufacturer to install an I/O module, and subsequently add other I/O modules to an existing set of operatively coupled modules. (p. 3, ln. 3-5).

Employing a sequential adaptability approach enables modules to communicate over a standard network interface without the need for an associated I/O rack and/or additional communications modules. (p. 2, ln. 29 – p. 3, ln. 2). Such techniques provide improved flexibility and reduced cost over the prior art. (p. 3, ln. 2-5).

**VI. Statement of the Issues (37 C.F.R. §1.192(c)(6))**

A. Whether claims 4, 7, 9, 10, and 12 are unpatentable under 35 U.S.C. §102(e) as being anticipated by Zegelin (U.S. 6,484, 216).

B. Whether claim 6 is unpatentable under 35 U.S.C. §103(a) as being obvious over Zegelin (U.S. 6,484,216).

C. Whether claim 11 is unpatentable under 35 U.S.C. §103(a) as being obvious over Zegelin (U.S. 6,484,216) in view of Burke *et al.* (U.S. 6,052,382).

**V. Grouping of Claims (37 C.F.R. §1.192(c)(7))**

For the purposes of this appeal only, the claims are grouped as follows:

Claims 4-12 stand or fall together.

**VI. Argument (37 C.F.R. §1.192(c)(8))**

**A. Rejection of Claims 4, 7, 9, 10, and 12 Under 35 U.S.C. §102(e)**

Claims 4, 7, 9, 10, and 12 stand rejected under 35 U.S.C. §102(e) as being anticipated by Zegelin (U.S. 6,484,216). Withdrawal of the rejection is respectfully requested for at least the following reasons. Zegelin fails to disclose or teach each and every element of claim 4 and claims 7, 9, 10, and 12, which depend therefrom, in the present invention; therefore, Zegelin does not anticipate the present invention to one ordinarily skilled in the art.

To establish a case of anticipation, 35 U.S.C. §102 requires that “*each and every*

*element* as set forth in the claim is found, either expressly or inherently described, in a single prior art reference.” *In re Robertson*, 169 F.3d 743, 745, 49 USPQ2d 1949, 1950 (Fed. Cir. 1999) (*citations omitted*).

Independent claim 4 of the present invention recites an adaptable control system for providing network communications, comprising: a physical media for providing communications to at least one I/O module, wherein the *physical media includes a first protocol and a second protocol, the first protocol to enable the at least one I/O module to receive the network communications* and the second protocol to provide the network communications to the at least one enabled I/O module.

Zegelin does not teach or suggest the *first protocol to enable the at least one I/O module to receive the network communications*. Rather, Zegelin merely discloses a method of utilizing a control signal to select a communications protocol. (*See* col. 2, ln. 30-40). Zegelin discloses sending an illegal control signal to the interface adapter, by setting both OEJ and WEJ (pins 9 and 15) low. (*See* col. 5, ln. 8-15). The illegal signal merely switches between communications protocols. (*See* col. 5, ln. 8-15). Thus, the communications protocol utilized can be changed, such as, from PCMCIA to serial. However, the illegal control signal is not a protocol. The control signal is merely a high or low voltage signal.

Protocol is defined as “a set of conventions governing the treatment and especially the formatting of data in an electronic communications system.” (Merriam-Webster Dictionary).

In contrast, applicant’s claimed invention comprises a *first protocol to enable the at least one I/O module to receive the network communications*. The exemplary protocol described in the specification comprises a sync bit, size bit, command, data and CRC. The sync bit signals to neighboring modules that a command is being transmitted. The size bit indicates the packet length. The command issued and the command specific data are included within the packet. Additionally, the CRC is the inverse of the remainder of the 12-bit quantity of the size bit, command and data fields divided by 8.

(See pg. 8).

In view of at least the foregoing reasons, the present invention as claimed presents novel subject matter and is not anticipated by Zegelin. Therefore, reversal of the rejection is respectfully requested.

**B. Rejection of Claim 6 Under 35 U.S.C. §103(a)**

Claim 6 stands rejected under 35 U.S.C. §103(a) as being unpatentable over Zegelin (U.S. 6,484,216). Applicants' representative respectfully traverses this rejection and submits that it should be reversed for at least the following reasons. Claim 6 depends from claim 4. Thus, Applicants' arguments as set forth above also apply to the rejection of claim 6. In view of the foregoing, the rejection should be reversed.

**C. Rejection of Claim 11 Under 35 U.S.C. §103(a)**

Claim 11 stands rejected under 35 U.S.C. §103(a) as being unpatentable over Zegelin (U.S. 6,484,216) in view of Burke *et al.* (U.S. 6,052,382). Again, applicants' representative respectfully traverse this rejection and submit that it should be reversed for at least the following reasons. Claim 11 depends from independent claim 4. Thus, Applicants' arguments as set forth above also apply to the rejection of claim 11.

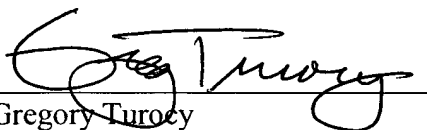
Zegelin, alone and/or in combination with Burke *et al.*, fails to make up for the aforementioned deficiencies as stated above with respect to independent claim 4. In particular, Burke *et al.* does not teach or suggest a ***first protocol for enabling an I/O module to receive the network communications.*** In view of the foregoing, the rejection should be reversed.

**VII. Conclusion**

For at least the above reasons, the claims currently under consideration are believed to be patentable over the cited reference. Accordingly, it is respectfully requested that the rejections of claims 4, 6, 7, and 9-12 and the objections of claims 5 and 8 be reversed.

If any additional fees are due in connection with this document, the Commissioner is authorized to charge those fees to Deposit Account No. 50-1063.

Respectfully submitted,  
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**VIII. Appendix of Claims (37 C.F.R. §1.192(c)(9))**

4. An adaptable control system for providing network communications, comprising:  
a physical media for providing communications to at least one I/O module, wherein the physical media includes a first protocol and a second protocol, the first protocol to enable the at least one I/O module to receive the network communications and the second protocol to provide the network communications to the at least one enabled I/O module.
5. The system of claim 4 wherein the at least one I/O module enables at least one other I/O module to form an I/O group *via* the first protocol.
6. The system of claim 4 wherein the second protocol provides at least one of DeviceNet, EtherNet and ControlNet network communications.
7. The system of claim 4 further comprising an interface for providing a pass-thru for the network communications.
8. The system of claim 7 wherein the interface provides a DC/DC converter for supplying I/O power and enabling the at least one other I/O module.
9. The system of claim 4 further comprising an adapter for establishing network communications.
10. The system of claim 9 wherein the adapter includes at least one processor for enabling the at least one I/O module.
11. The system of claim 9 wherein the adapter includes an Offlink Connection Manager (OCM) object, a node list, and an I/O data table.

12. The system of claim 4 wherein the at least one I/O module includes a processor for receiving the first protocol as an input and providing the first protocol as an output.